IN THE CLAIMS:

Please cancel claims 18-40. Please add new claims 41-53 as follows:

41. (New) A method of processing data with a set of Turbo Codes derived from a universal constituent code, the method comprising the steps of:

encoding a signal at a first and second encoder using a universal constituent code, the first encoder and the second encoder each producing at least one parity bit; and

puncturing the respective at least one parity bit at each encoder with a puncturing pattern that provides a reduced signal-to-noise ratio loss.

42. (New) A method according to claim 41, wherein the universal constituent code is a rate 1/2 constituent code having a transfer function: $G(D) = [1, (1+D+D^3)/(1+D^2+D^3)]$, where D denotes unit delay in presentation of data bits to an encoder.

43. (New) A method according to claim 42, wherein one of the puncturing steps comprises alternately puncturing parity bits between the first and the second encoder.

44. (New) A method according to claim 42, wherein one of the puncturing steps comprises transmitting all the parity bits at the first and second encoder.

45. (New) A method as claimed in claim 41, wherein the universal constituent code is a rate 1/3 constituent code having a transfer function: $G(D) = [1, (1+D+D^3)/(1+D^2+D^3), (1+D+D^2+D^3)/(1+D^2+D^3)]$, where D denotes unit delay in presentation of data bits to an encoder.

46. (New) A method according to claim 45, wherein each of said first and second encoder produce first and second parity bits; and

wherein a rate ½ Turbo Code is formed by transmitting half of said first parity bits produced by said first encoder and half of said first parity bits produced by said second encoder.

47. (New) A method according to claim 45, wherein each of said first and second encoder produce first and second parity bits; and

wherein a rate 1/3 Turbo Code is formed by transmitting said first parity bits produced by said first encoder and said first parity bits produced by said second encoder.

48. (New) A method according to claim 45, wherein each of said first and second encoder produce first and second parity bits; and

wherein a rate ¼ Turbo Code is formed by transmitting said first parity bits produced by said first encoder, half of the second parity bits produced by said first encoder, half of said first parity bits produced by said second encoder, and the second parity bits produced by said second encoder.

49. (New) An apparatus adapted to perform the method of one of claims 41 to 48.

50. (New) A method of processing data with a set of Turbo Codes derived from a universal constituent code, the method comprising the steps of:

encoding a signal at a first and second encoder using a universal constituent code, the first encoder and the second encoder each producing at least one parity bit; and

determining a sequence of bits output as a result of said encoding step to transmit that provides a reduced signal-to-noise ratio loss.

51. (New) A method according to claim 50, wherein the universal constituent code is a rate 1/2 constituent code having a transfer function: $G(D) = [1, (1+D+D^3)/(1+D^2+D^3)]$, where D denotes unit delay in presentation of data bits to an encoder.

52. (New) A method according to claim 51, wherein one of the puncturing steps comprises transmitting all the parity bits produced by each of said first and second encoder.

53. (New) An apparatus adapted to perform the method of one of claims 50, 51, or 52.